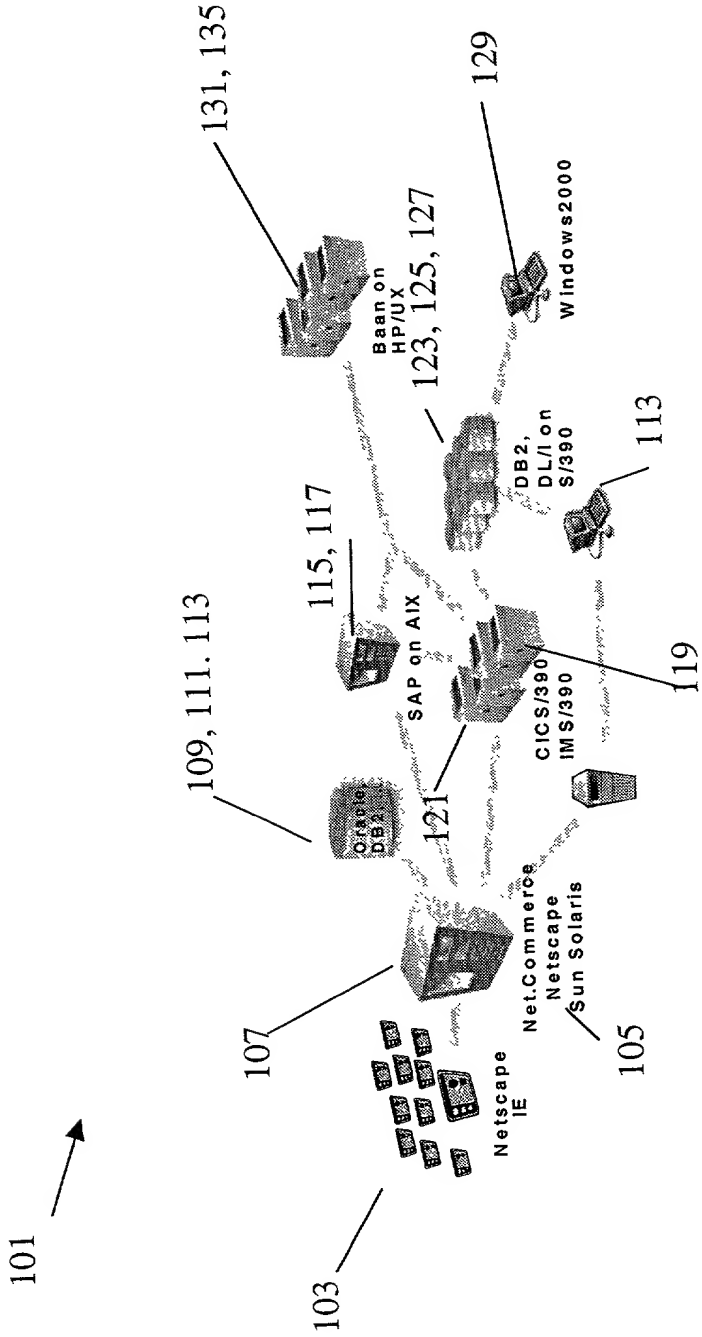
101
103
Netscape IE
107
Net.Commerce Netscape Sun Solaris
105
109, 111. 113
Oracle DB2
121
115, 117
SAP on AIX
CICS/390 IMS/390
119
131, 135
Baan on HP/UX
123, 125, 127
DB2, DL/I on S/390
113
129
Windows2000

Figure1

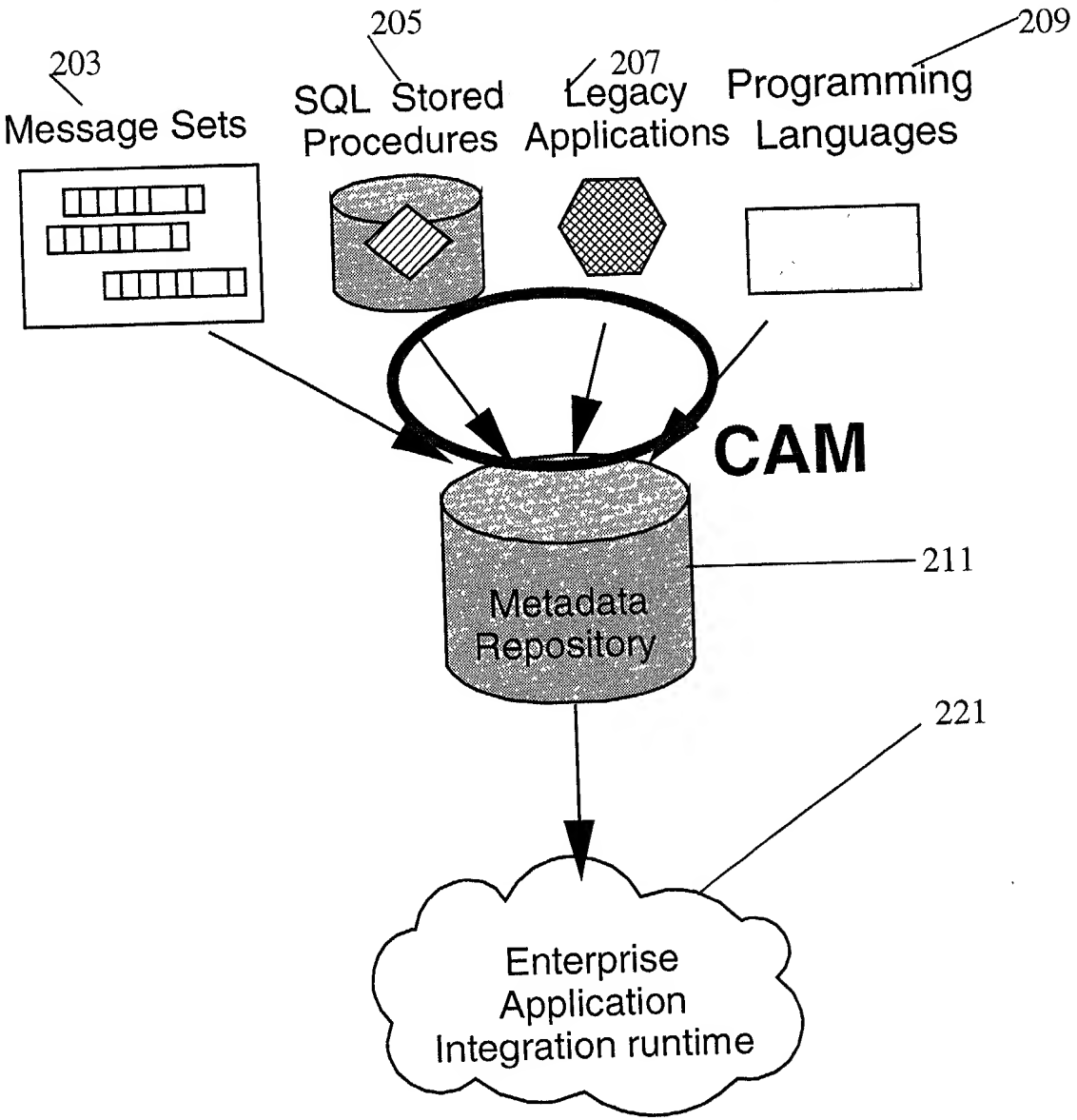
205
209
203
207
Message Sets
SQL Stored Procedures
Legacy Applications
Programming Languages
CAM
211
Metadata Repository
221
Enterprise Application Integration runtime

Figure 2

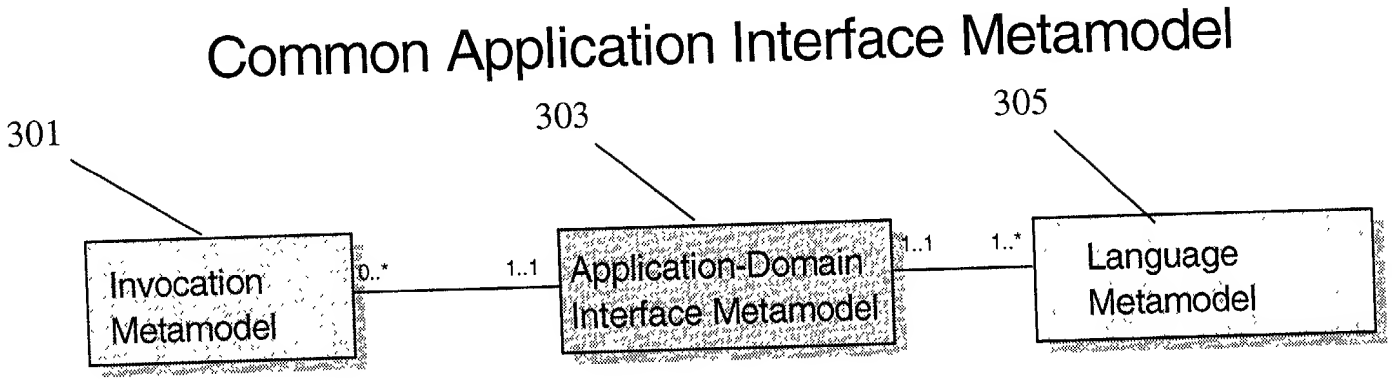
Common Application Interface Metamodel
301
303
305
Invocation Metamodel
0..*
1..1
Application-Domain Interface Metamodel
1..1
1..*
Language Metamodel

Figure 3

To:USPTO 2956 P.060

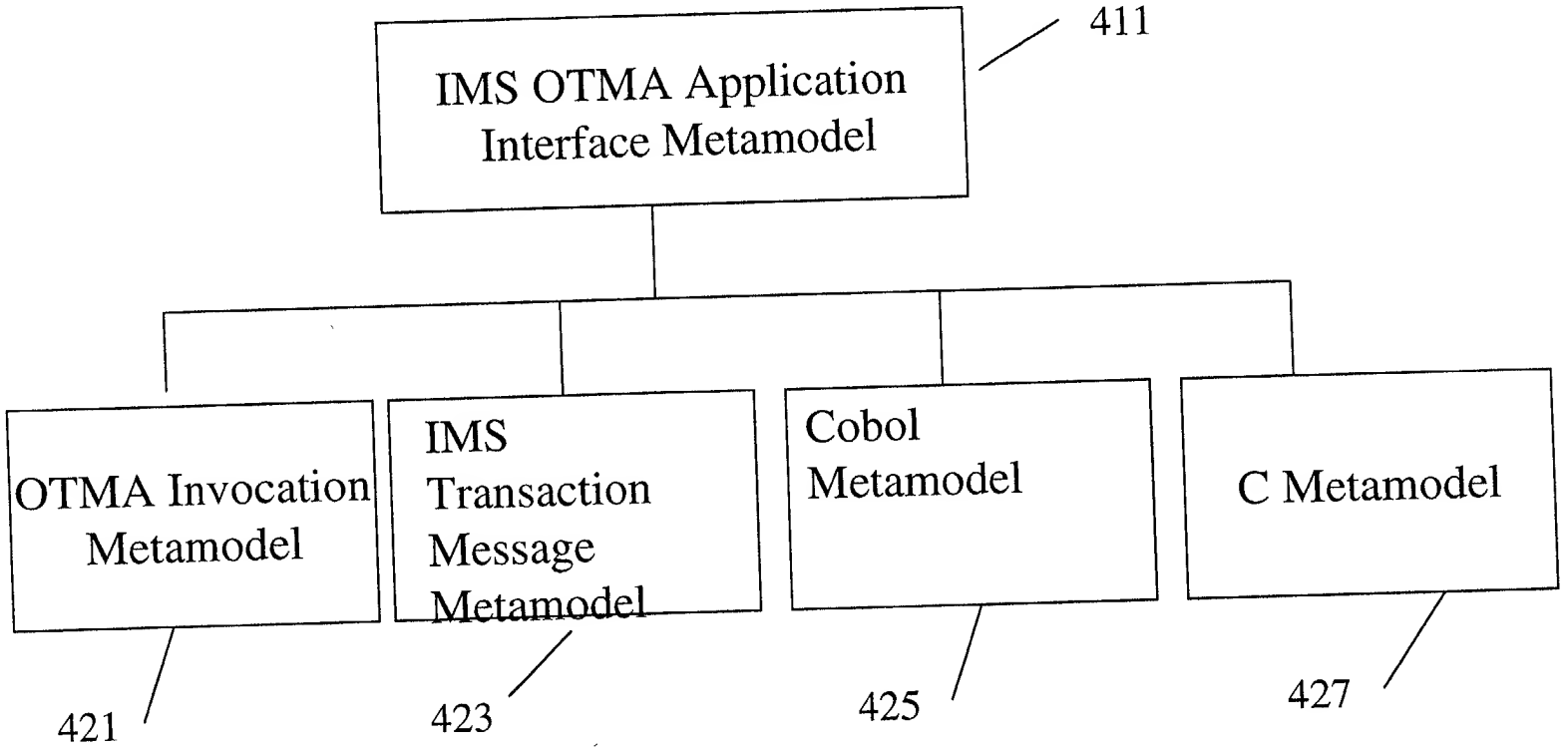

Figure 4

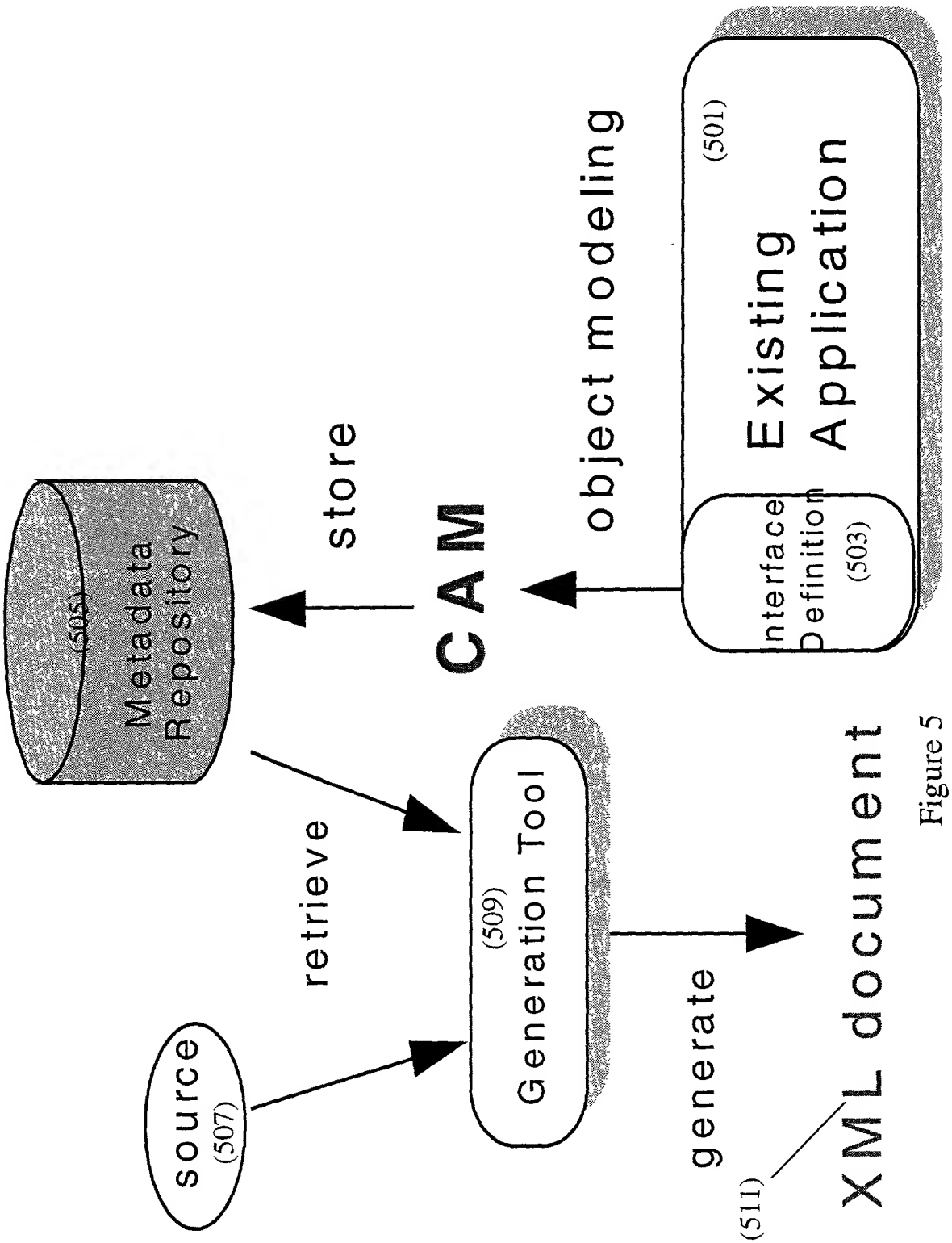
Metadata Repository
(505)
store
CAM
object modeling
Existing Application
(501)
Interface Definition
(503)
source
(507)
retrieve
Generation Tool
(509)
generate
(511)
XML document

Figure 5

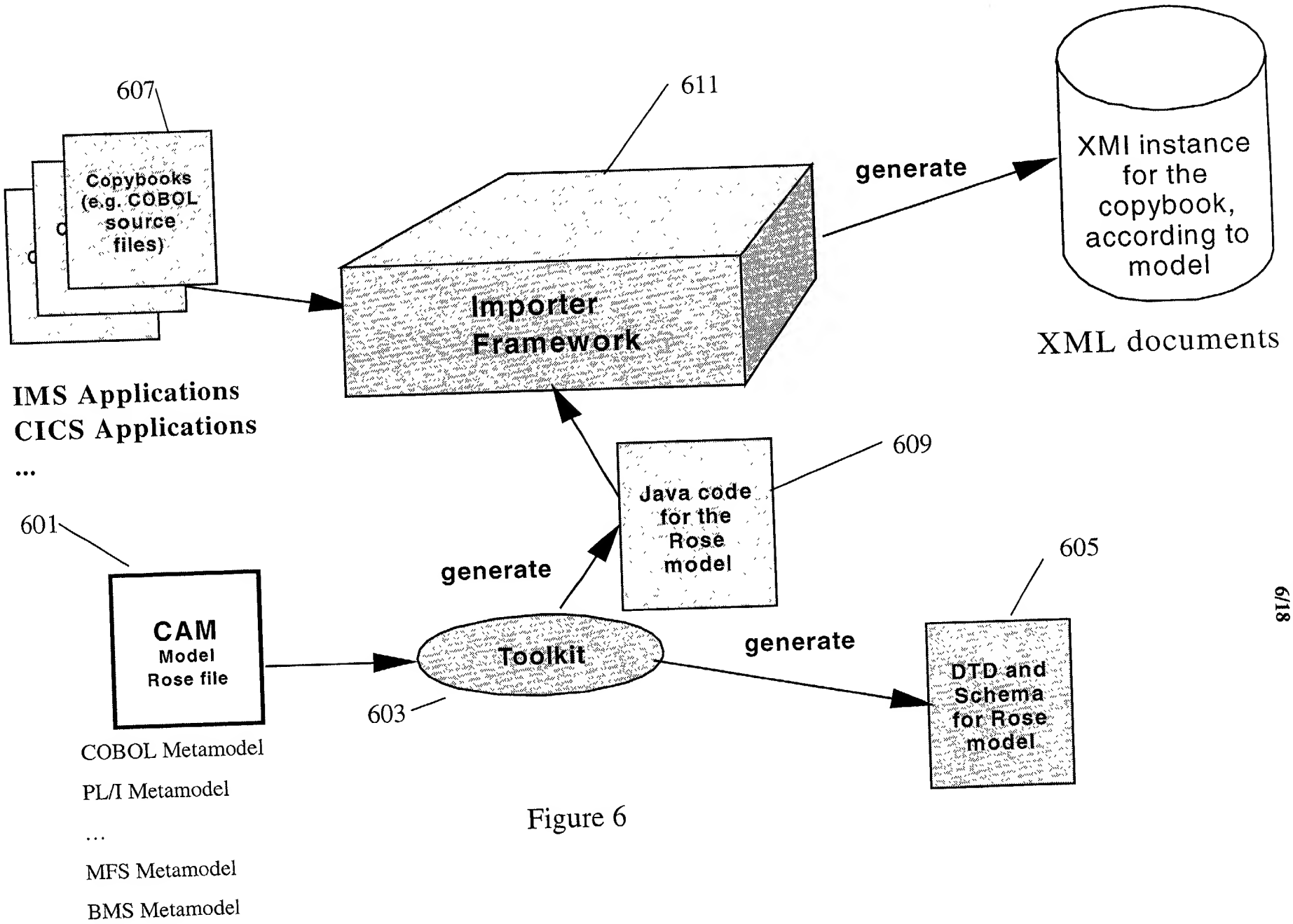
607
Copybooks (e.g. COBOL source files)
611
Importer Framework
generate
XMI instance for the copybook, according to model
XML documents
IMS Applications
CICS Applications
...
609
Java code for the Rose model
601
CAM Model Rose file
generate
Toolkit
generate
605
DTD and Schema for Rose model
603
COBOL Metamodel
PL/I Metamodel
...
MFS Metamodel
BMS Metamodel

Figure 6

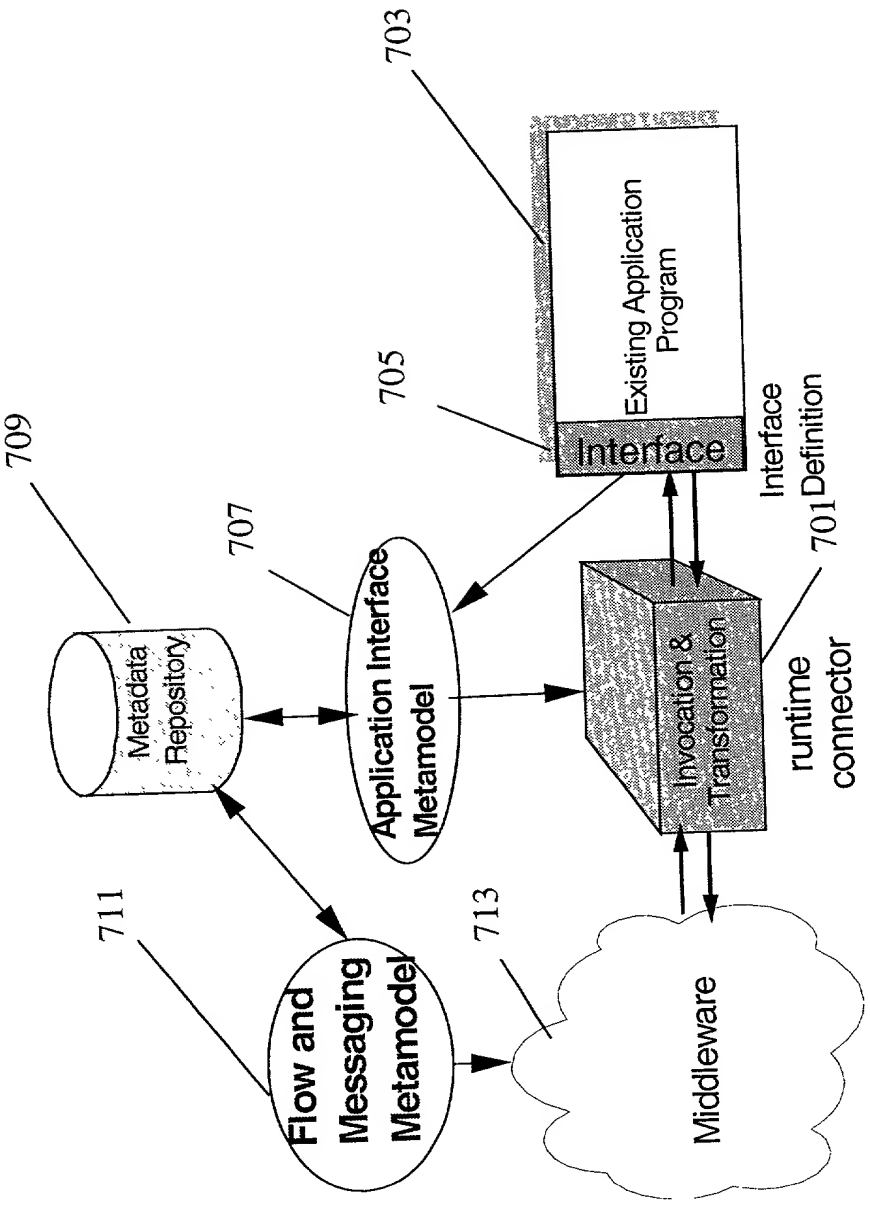
703
Existing Application Program
705
Interface
Interface Definition
701
runtime connector
Invocation & Transformation
709
Metadata Repository
707
Application Interface Metamodel
711
Flow and Messaging Metamodel
713
Middleware

Figure 7

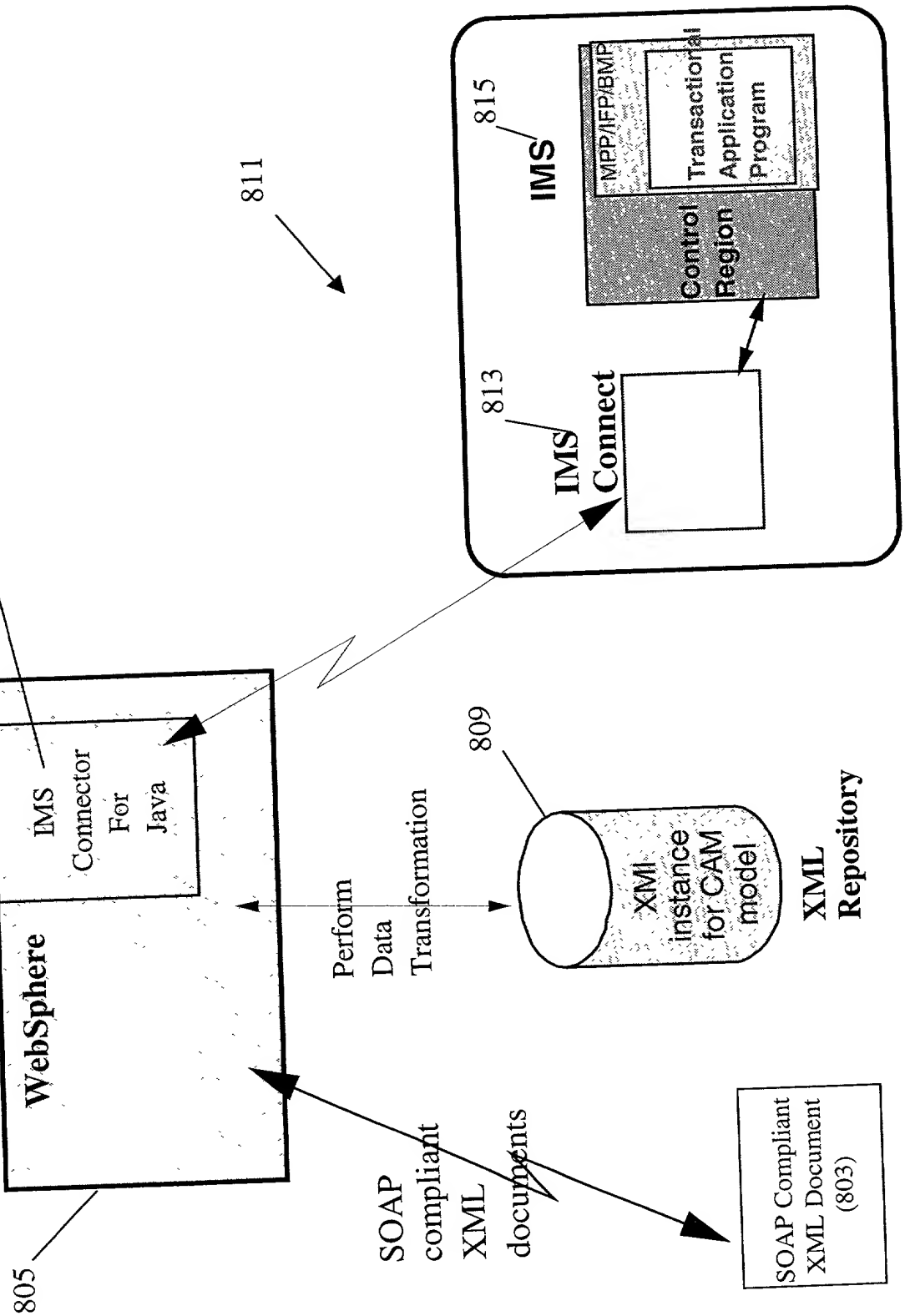
805
WebSphere
IMS Connector For Java
807
811
815
IMS
MPP/IFP/BMP
Transactional Application Program
Control Region
813
IMS Connect
Perform Data Transformation
809
XML instance for CAM model
XML Repository
SOAP compliant XML documents
SOAP Compliant XML Document (803)

Figure 8

TDLangModelElement
name : String
<<derived>>
TDLangClassifier
+tdLangSharedType
1..1
+tdLangTypedElement
0..*
TDLangElement
0..*
+tdLangElement
<<derived>>
TDLangComposedType
+tdLangGroup
0..1

Figure 9

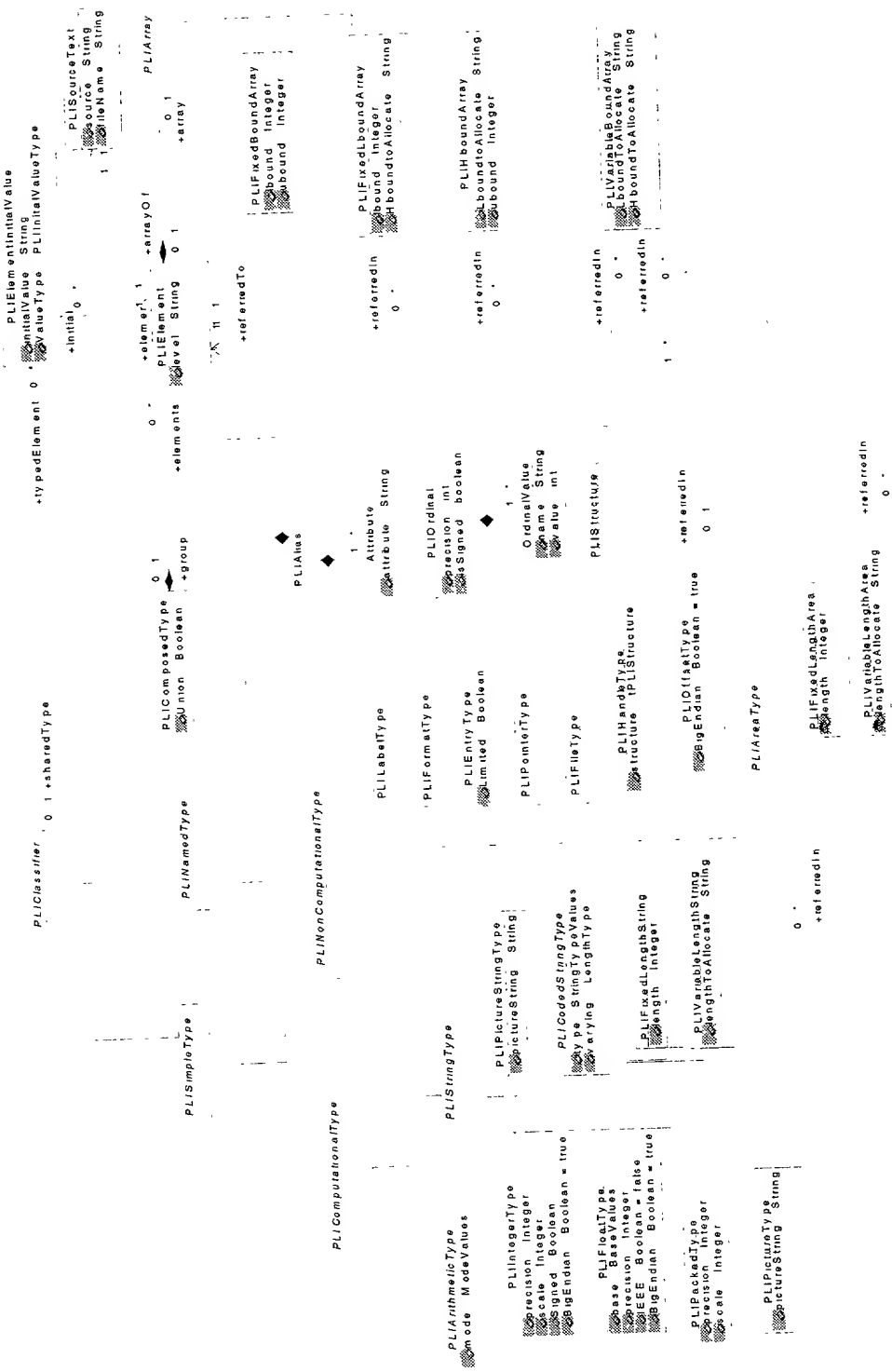

Figure 10

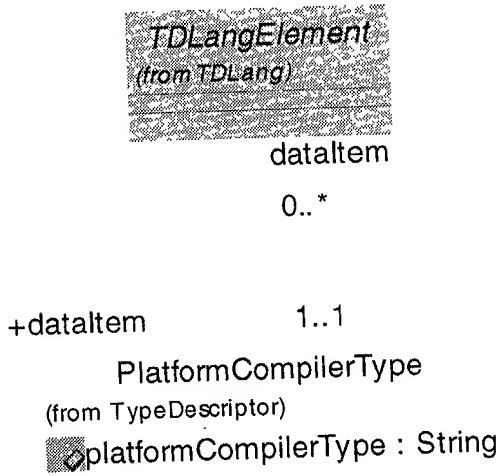
TDLangElement
(from TDLang)
dataItem
0..*
+dataItem
1..1
PlatformCompilerType
(from TypeDescriptor)
platformCompilerType : String

Figure 11

<<enumeration>>
signCoding
twosComplement
onesComplement
signMagnitude
zonedSigns
packedSigns
unsignedBinary
unsignedDecimal
<<enumeration>>
lengthEncoding
fixedLength
lengthPrefixed
nullTerminated
<<enumeration>>
floatType
Unspecified
IEEEextendedIntel
IEEEextendedAIX
IEEEextended390
IEEEextendedAS400
IEEEnonextended
IBM390Hex
IBM400Hex
<<enumeration>>
accessor
ReadOnly
WriteOnly
ReadWrite
NoAccess
<<enumeration>>
packedDecimalSign
IMS
IMSCustom
INT_OS2_AIX
<<enumeration>>
bitModePad
mode16
mode24
mode31
mode32
mode64
mode128
<<enumeration>>
addUnit
bit
byte
word
doubleWord

Figure 12

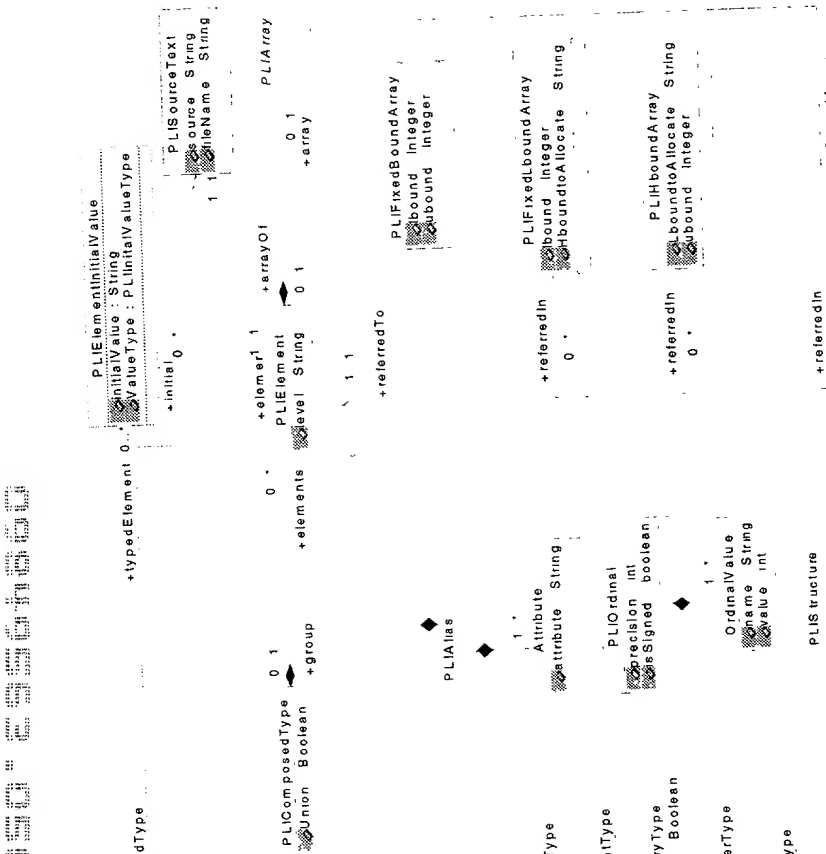
PLIClassifier
name : String
0..1 +sharedType
+typedElement 0..*
PLIElementInitialValue
initialValue : String
valueType : PLIInitialValueType
+initial 0..*
PLISourceText
source String
fileName String
PLIArray
PLISimpleType
PLINamedType
PLIComposedType
Union Boolean
0..1
+group
+elements 0..*
+element 1
PLIElement
level String
+arrayOf
0..1
+array
PLIFixedBoundArray
bound Integer
bound Integer
+referredTo
PLIAlias
PLINonComputationalType
PLIComputationalType
PLILabelType
PLIFormatType
PLIEntryType
limited Boolean
PLIPointerType
PLIFileType
PLIHandleType
structure !PLIStructure
PLIOffsetType
bigEndian Boolean = true
+referredIn
0..1
PLIStructure
PLIOrdinal
precision int
isSigned boolean
OrdinalValue
name String
value int
Attribute
attribute String
+referredIn
0..*
PLIFixedLboundArray
bound Integer
+boundtoAllocate String
PLIHboundArray
+boundtoAllocate String
bound Integer
PLIVariableBoundArray
+boundToAllocate String
+boundtoAllocate String
PLIStringType
PLIPictureStringType
pictureString String
PLICodedStringType
type StringTypeValues
varying LengthType
PLIFixedLengthString
length Integer
PLIVariableLengthString
lengthToAllocate String
PLIAreaType
PLIFixedLengthArea
length Integer
PLIVariableLengthArea
lengthToAllocate String
+referredIn
0..*
PLIArithmeticType
mode ModeValues
PLIIntegerType
precision Integer
scale Integer
isSigned Boolean
bigEndian Boolean = true
PLIFloatType
base BaseValues
precision Integer
IEEE Boolean = false
bigEndian Boolean = true
PLIPackedType
precision Integer
scale Integer
PLIPictureType
pictureString String

Figure 13

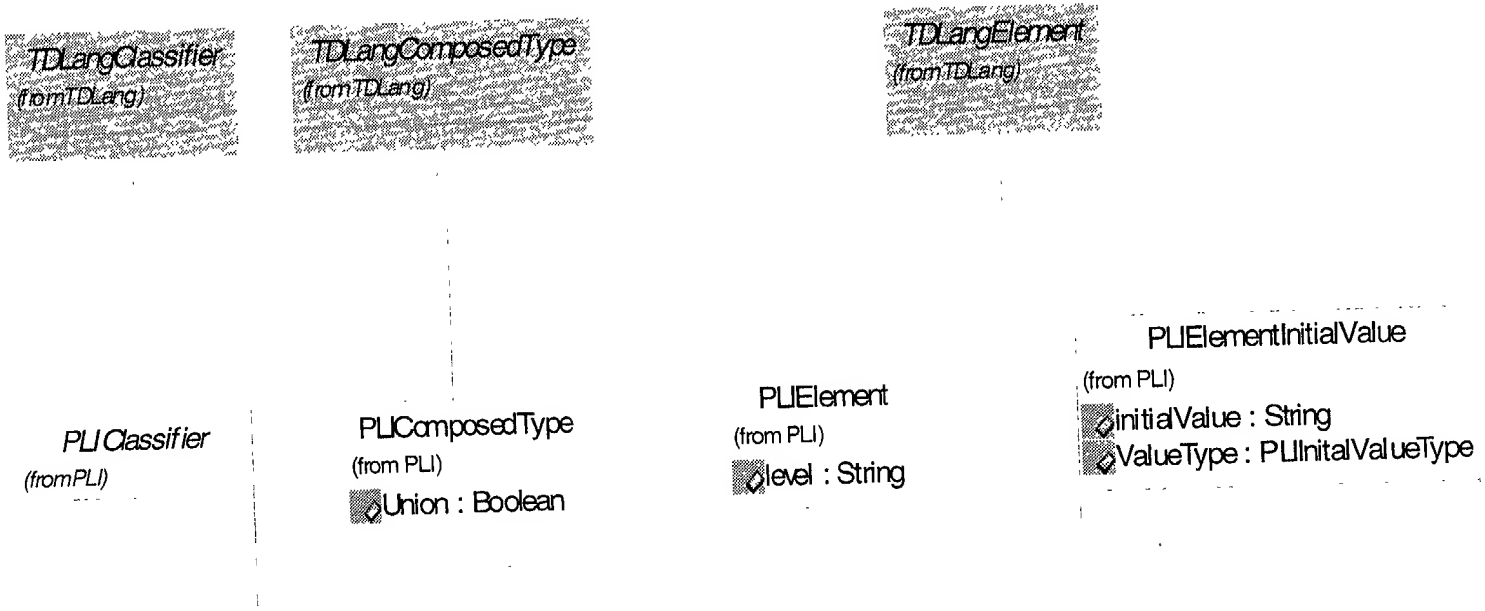
TDLangClassifier
(fromTDLang)
TDLangComposedType
(fromTDLang)
TDLangElement
(fromTDLang)
PLIClassifier
(fromPLI)
PLIComposedType
(from PLI)
Union : Boolean
PLIElement
(from PLI)
level : String
PLIElementInitialValue
(from PLI)
initialValue : String
ValueType : PLIInitalValueType

Figure 14

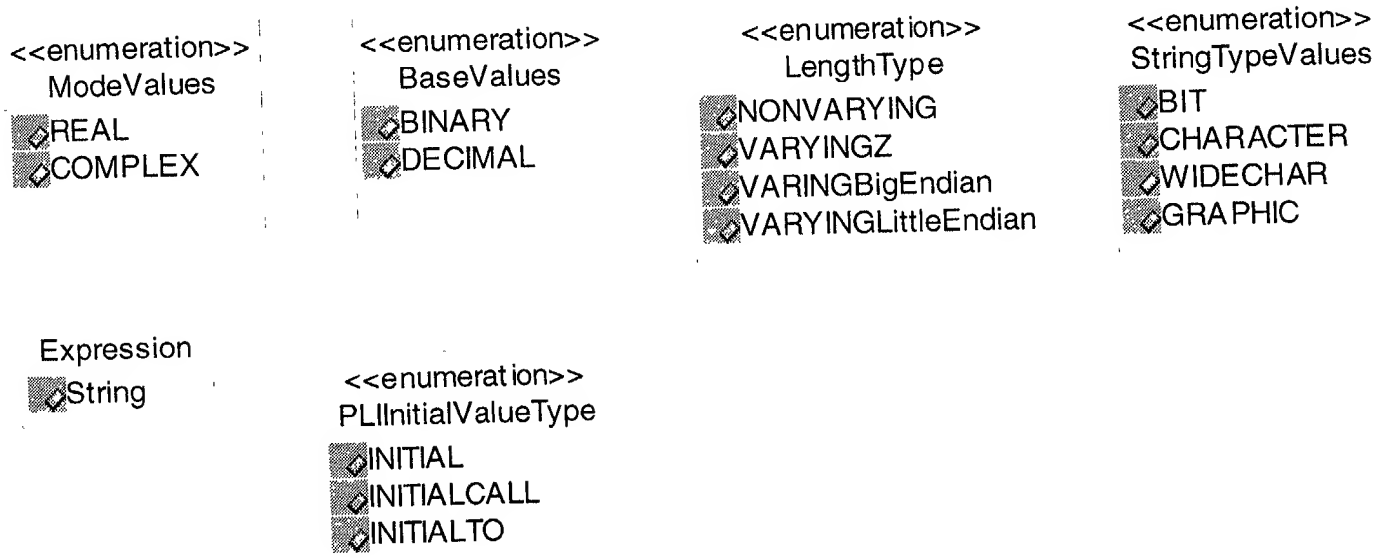
<<enumeration>>
ModeValues
REAL
COMPLEX
<<enumeration>>
BaseValues
BINARY
DECIMAL
<<enumeration>>
LengthType
NONVARYING
VARYINGZ
VARINGBigEndian
VARYINGLittleEndian
<<enumeration>>
StringTypeValues
BIT
CHARACTER
WIDECHAR
GRAPHIC
Expression
String
<<enumeration>>
PLIInitialValueType
INITIAL
INITIALCALL
INITIALTO

Figure 15

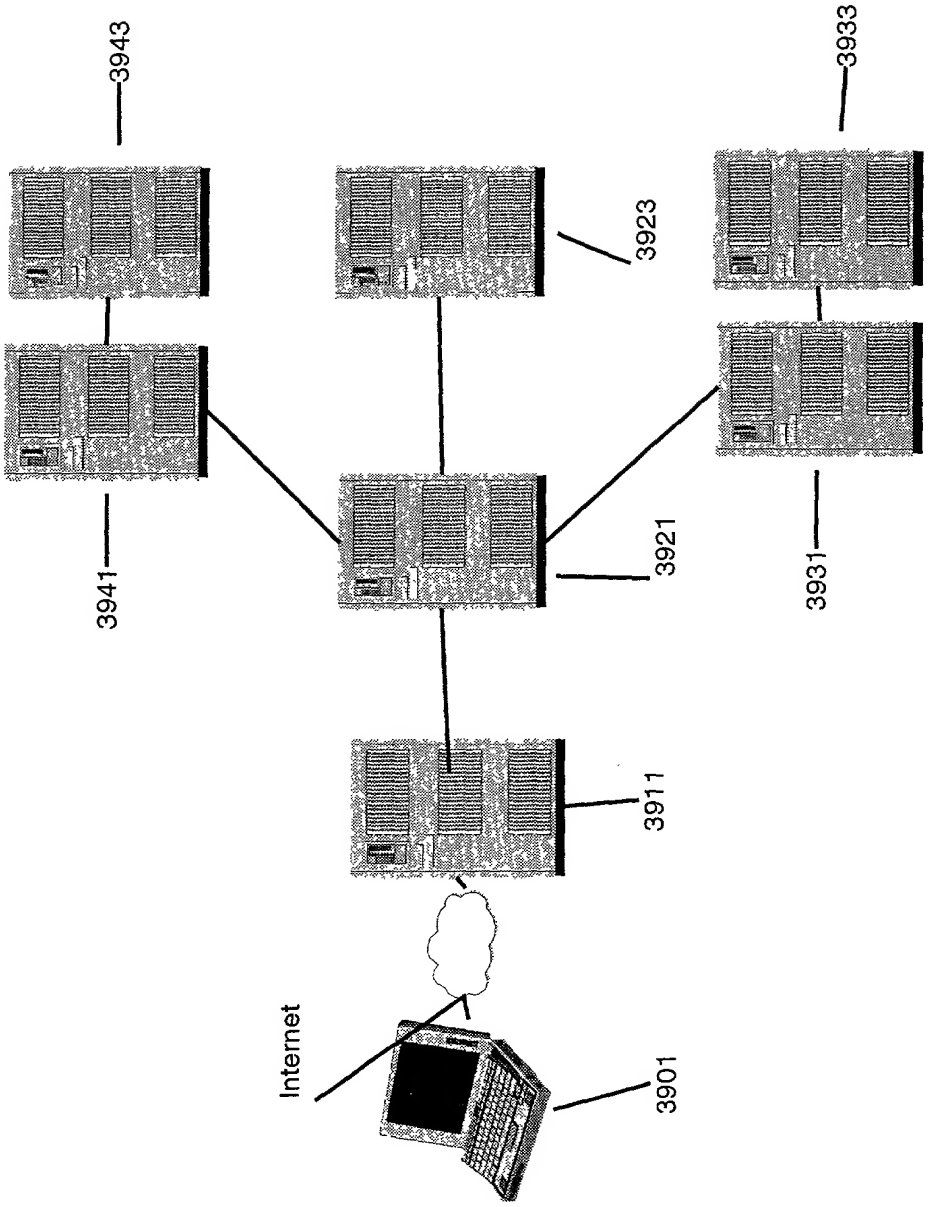

FIGURE 16

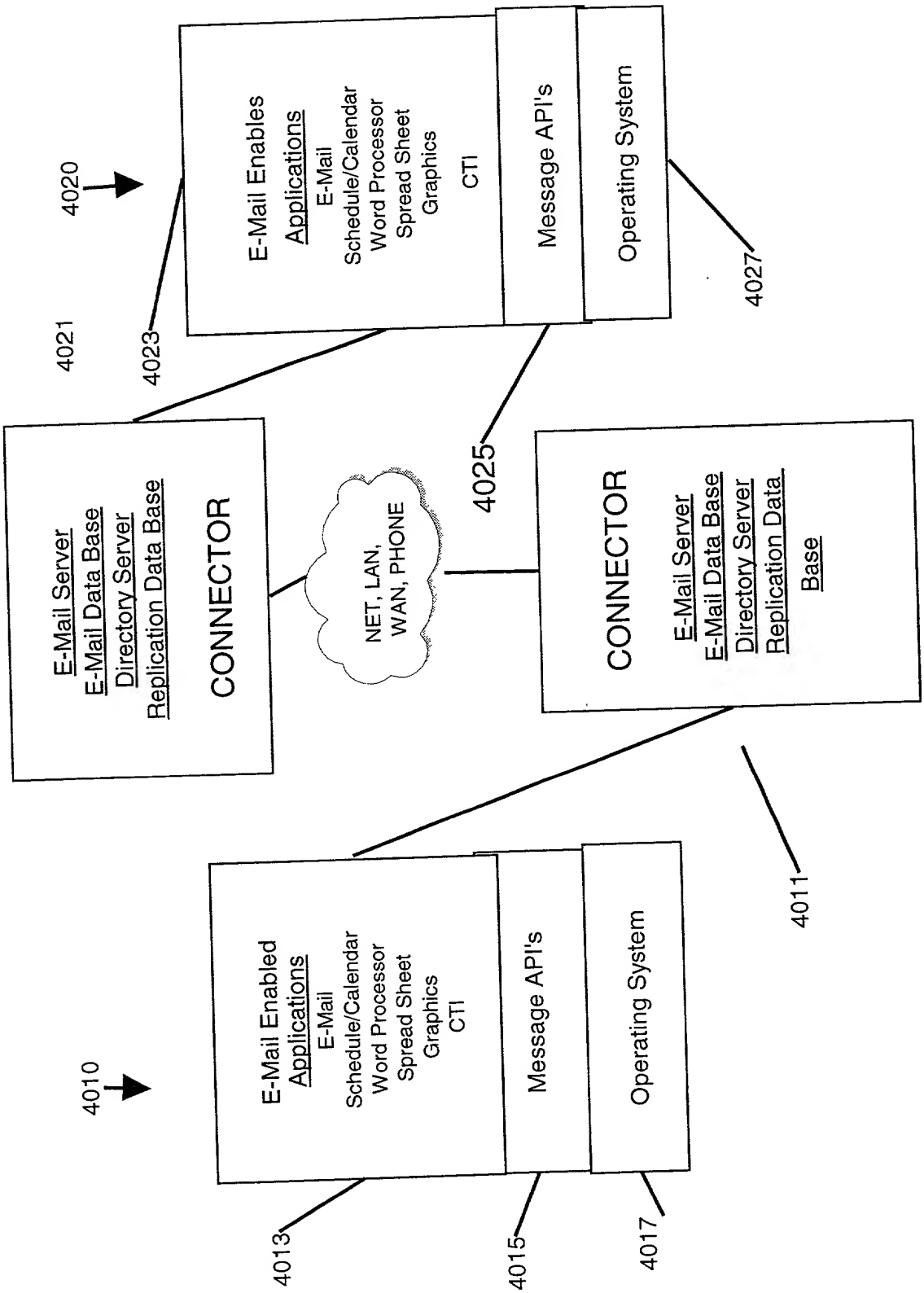
4010
E-Mail Enabled Applications
E-Mail
Schedule/Calendar
Word Processor
Spread Sheet
Graphics
CTI
Message API's
Operating System
4013
4015
4017
4011
4025
NET, LAN, WAN, PHONE
E-Mail Server
E-Mail Data Base
Directory Server
Replication Data Base
CONNECTOR
4020
E-Mail Enables Applications
E-Mail
Schedule/Calendar
Word Processor
Spread Sheet
Graphics
CTI
Message API's
Operating System
4021
4023
4027

FIGURE 17

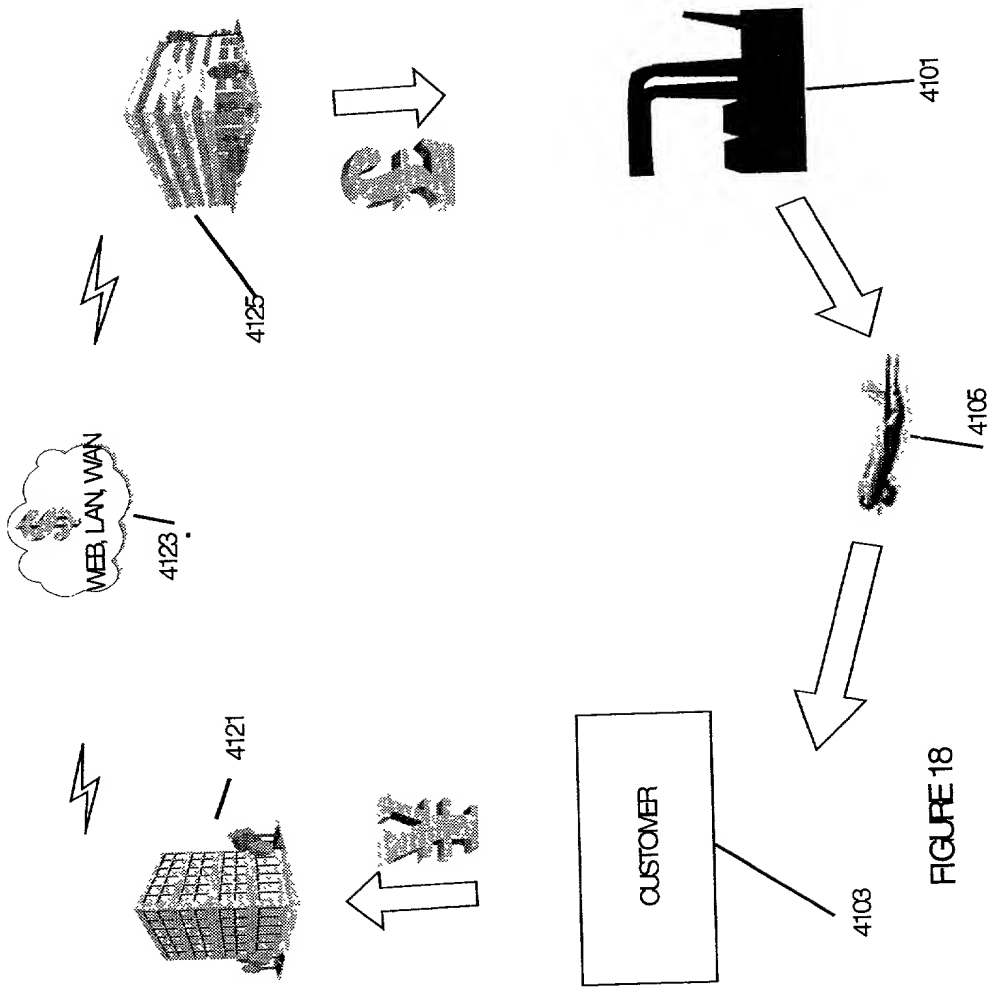

FIGURE 18